**Functional Requirements Document (FRD)**

**Project Title: Healthcare Appointment Optimization System**

**1. Objective**

To design an optimized appointment scheduling system for a healthcare clinic that reduces no-shows and enhances resource (doctor) utilization.

**2. Stakeholders**

* Reception Staff
* Doctors
* Patients
* Clinic Administrator

**3. Functional Requirements**

**3.1 Appointment Scheduling**

* Book appointment by selecting doctor and time slot
* Auto-check for availability
* Booking confirmation alert (SMS/Email)

**3.2 No-Show Detection**

* Flag patients with more than 2 no-shows
* Alert staff when such patients try to book

**3.3 Doctor Utilization Tracker**

* Monitor hours booked vs hours available
* Weekly and monthly reports

**3.4 Cancellations**

* Allow cancellation up to 24 hours in advance
* Track reasons for cancellation (optional)

**3.5 Reporting Dashboard**

* Appointment trends
* Peak hours
* No-show patterns
* Doctor availability/utilization

**4. Non-Functional Requirements**

* System uptime: 99.5%
* Daily data refresh
* User-friendly interface (mobile-friendly preferred)
* Data security compliance (HIPAA/GDPR as applicable)

**5. Assumptions**

* Doctors work within defined availability windows
* Patient records exist and are accurate
* Booking happens via front desk only